## CHAPTER 2

# VOICE COMMUNICATIONS

*Upon completing this chapter you should be able to do the following:*

- *Identify circuit procedures, discipline, and techniques in voice communications.*
- *Describe radiotelephone (R/T) security elements, voice procedures, and basic message formats.*
- *Explain the use of R/T call signs, circuits, and nets.*
- *Explain the use of R/T executive methods.*
- *Identify the use and format for R/T circuit logs.*

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Whether you are ashore or at sea, your professional duties as a Radioman will include radiotelephone (R/T) communications. You should understand that uncovered (nonsecure) radio transmissions are the least secure means of communications, and that R/T voice communications are the least secure of all radio communications. Despite these drawbacks, R/T communications play an important part in our day-to-day fleet operations and in the control of coastal and harbor shipping.

### CIRCUIT PROCEDURES

R/T is the easiest, most convenient method of relaying real-world situation traffic from ship to ship, ship to shore, or shore to ship. All that is necessary is that you pick up a transmitter handset and speak into it.

A radiotelephone circuit would quickly become unusable if everyone on the circuit failed to follow the same rules and procedures. Much of what is accomplished over an R/T circuit involves proper techniques and training, coupled with common sense and experience. It is impossible to cover every conceivable situation that may arise when using voice communications. There are many simple R/T procedures that apply to these circuits.

### CIRCUIT DISCIPLINE

Unless using secure voice communications equipment, you must assume that everything you say when using R/T is being intercepted. The inherent dangers of interception can be significantly reduced by adhering to the principles of strict circuit discipline.

R/T transmissions should be as short and concise as possible without sacrificing clarity. It is important that all personnel using voice communications be instructed in the proper use of the handset and R/T equipment. They must also be cautioned on the likelihood of transmission intercept.

**Adherence to prescribed operating procedures is mandatory!** Deviations from these procedures create confusion, reduce reliability and speed, and tend to nullify security precautions. Once you know the proper operating procedures, you can use your initiative and common sense to satisfy specific operating requirements.

Although circuit discipline is discussed here with respect to its connection with R/T procedures, you must understand that the requirement for circuit discipline applies to all communications circuits—not just R/T circuits. Every operator must recognize and avoid the following malpractice, which could endanger communications security:

- Linkage or compromise of classified call signs and address groups by plain language or association with unclassified call signs;
- Linkage or compromise of encrypted call signs and address groups by association with other call signs, address groups, or plain language (for example, use of encrypted call signs in the call and unencrypted call signs in the message address);
- Misuse and confusion of call signs, routing indicators, address groups, and address indicating groups (AIGs) (which could result in the nondelivery of an important message, a compromise, or the linking of classified and unclassified call signs and address groups);
- Violation of emission control (EMCON) conditions;
- Unofficial conversation between operators;
- Transmitting on a directed net without permission;
- Transmitting the operator's personal sign;
- Excessive repetition of prowords;
- Use of plain language in place of applicable prowords;
- Unnecessary transmissions;
- Incorrect and unauthorized procedures;
- Identification of unit locations;
- Excessively long calls (when a station is called and does not answer within a reasonable time, presumably because a condition of radio silence prevails, the message may be transmitted in the blind or by some other method);
- Use of profane, indecent, or obscene language; and
- Failure to maintain radio watches on designated frequencies and at prescribed times.

## CIRCUIT TECHNIQUES

You should use the following guide in developing good voice circuit techniques. To enhance your proficiency, you should practice the techniques on a training net. Remember, though, that nothing can take the place of good common sense.

**DO:**

- Listen before transmitting. Unauthorized break-in causes confusion and often blocks a transmission in progress to the extent that neither transmission gets through.
- Speak clearly and distinctly. Both slurred syllables and clipped speech are hard to understand. A widespread error among untrained operators is failure to emphasize vowels sufficiently.
- Speak slowly. Give the receiving operator a chance to get your message down. This can save time and repetitions.
- Avoid extremes of pitch. A high-pitched voice cuts through interference best, but is shrill and unpleasant if too high. A lower pitch is easier on the ear, but is difficult to understand through background noises if too low.
- Be natural. Maintain a normal speaking rhythm. Group words in a natural manner. Send your message phrase for phrase instead of word for word.
- Use standard pronunciation. Talkers who use the almost standard pronunciation of a broadcast network announcer are easiest to understand.
- Speak in a moderately strong voice in order to override unavoidable background noises and to prevent dropouts.
- Keep correct distance between lips and handset. A distance of about 2 inches is correct for most handsets. If the distance is too great, speech becomes inaudible and background noises interfere. If the distance is too small, blaring and blasting result.
- Give an accurate evaluation in response to a request for a radio check. A transmission with feedback or a high level of background noise is not "loud and clear," even though the message can be understood.
- Pause momentarily after each normal phrase, and interrupt your carrier. This allows any other station with higher precedence traffic to break in.

- Adhere strictly to prescribed procedures. Up-to-date R/T procedures are found in *Radiotelephone Procedure,* ACP 125.
- Transact your business and get off the air. Excessive preliminary calls waste time.

**DO NOT:**

- Transmit while surrounded by others loudly discussing the next maneuver or event. It confuses the receiving stations and could be a serious security violation.
- Hold the handset button in the push-to-talk position until absolutely ready to transmit. Your carrier will block other communications on the net.
- Hold a handset in such a position that there is a possibility of having feedback from the earphone added to other background noises.
- Hold a handset loosely. A firm pressure on the push-to-talk button prevents unintentional release and consequent signal dropout.
- Tie up a circuit with test signals. Usually, 10 seconds is sufficient for testing.

## PHONETIC ALPHABET

Some letters of the alphabet have similar sounds; therefore, it is easy to confine the sounds of these letters. For this reason, the standard phonetic equivalents of the letters of the alphabet are used in R/T communications. Using the phonetic alphabet saves many corrections and constant repetitions that would otherwise be necessary. Table 2-1 contains the alphabet with a list of its phonetic and spoken equivalents. The bolded portions of the spoken equivalents are the parts of the word that should be given the greatest emphasis when spoken.

When signals from naval signal books are transmitted by voice, names of flags (ALFA, BRAVO, and so on) are used since they appear in the signal books. Difficult words within the text of plain text messages may be phonetically spelled, using the phonetic alphabet, preceded by the proword I SPELL. When the operator can pronounce the word to be spelled, he or she does so before and after the spelling of the word to be identified. For example, a phrase in a plain text message might contain the words "Kisatchie Reservation." Upon reaching these two words, the operator would say, ". . .Kisatchie, I SPELL, KILO, INDIA, SIERRA, ALFA, TANGO, CHARLIE, HOTEL, INDIA, ECHO, Kisatchie, Reservation . . ." (rest of text).

**Table 2-1—Phonetic Alphabet**

| LETTER | PHONETIC | SPOKEN AS |
|---|---|---|
| A | ALFA | **AL** FAH |
| B | BRAVO | **BRAH** VOH |
| C | CHARLIE | **CHAR** LEE OR **SHAR** LEE |
| D | DELTA | **DEL** TAH |
| E | ECHO | **ECK** OH |
| F | FOXTROT | **FOKS** TROT |
| G | GOLF | GOLF |
| H | HOTEL | HOH **TELL** |
| I | INDIA | **IN** DEE AH |
| J | JULIETT | **JEW** LEE **ETT** |
| K | KILO | **KEY** LOH |
| L | LIMA | **LEE** MAH |
| M | MIKE | MIKE |
| N | NOVEMBER | NO **VEM** BER |
| O | OSCAR | **OSS** CAH |
| P | PAPA | PAH **PAH** |
| Q | QUEBEC | KEY **BACK** |
| R | ROMEO | **ROW** ME OH |
| S | SIERRA | SEE **AIR** RAH |
| T | TANGO | **TANG** GO |
| U | UNIFORM | **YOU** NEE FORM or **OO** NEE FORM |
| V | VICTOR | **VIC** TAH |
| W | WHISKEY | **WISS** KEY |
| X | X-RAY | **ECKS** RAY |
| Y | YANKEE | **YANG** KEY |
| Z | ZULU | **ZOO** LOO |

When a text is composed of pronounceable words, the words are spoken as such. When a text is encrypted, the groups are transmitted by the phonetic equivalents of the individual letters and without the proword I SPELL. For example, the encrypted group DRSRM is spoken "DELTA, ROMEO, SIERRA, ROMEO, MIKE" and is counted as one group.

## PRONUNCIATION OF NUMERALS

You must use care in distinguishing numerals from similarly pronounced words. When transmitting numerals, you may use the proword FIGURES preceding such numbers. For example, the text of an R/T message contains the phrase "From Ten Companies." There is a possibility that the phrase would sound like "From Tin Companies" if spoken as it is written. An operator, therefore, could use the proword FIGURES when this phrase is reached in the text by saying "From FIGURES One Zero Companies." The operator could also use the proword I SPELL here. For example, upon reaching the same phrase in the text of the message, an operator could transmit "From Ten, I SPELL, TANGO, ECHO, NOVEMBER, Ten, Companies."

When numerals are transmitted, their correct pronunciation is as follows:

| Numeral | Pronounced |
|---|---|
| 0 | Ze ro |
| 1 | Wun |
| 2 | Too |
| 3 | Tree |
| 4 | Fo wer |
| 5 | Fife |
| 6 | Six |
| 7 | SE ven |
| 8 | Ait |
| 9 | NIN er |

The numeral 0 is always spoken as "zero," never as "oh." Decimal points are spoken as "day-see-mal."

Numbers are transmitted digit for digit except that exact multiples of thousands are spoken as such. There are, however, special cases, such as antiair warfare reporting procedures, when the normal pronunciation of numerals is prescribed and digit-for-digit transmission does not apply. For example, in the case given, the number 17 is pronounced "seventeen"; not "one seven." The following is a list of numbers and their normal R/T pronunciation:

| Number | Pronounced |
|---|---|
| 11 | Wun Wun |
| 55 | Fife Fife |
| 1000 | Wun Tou-zand |
| 1920 | Wun Niner Too Zero |
| 34,000 | Three Fower Tou-zand |
| 349,204 | Three Fower Niner Too Zero Fower |

## DECIMALS, DATES, AND ABBREVIATIONS

As we mentioned earlier, the decimal point is spoken as "day-see-mal." For example, 920.4 would be spoken as "Niner Too Zero Day-see-mal Fower."

Dates are spoken digit for digit, with the months spoken in full. For example, the date 20 September is spoken as "Too Zero September."

There are some rules that you should remember concerning abbreviations in the text of an R/T message. For example, initials are spoken phonetically when used alone or with short titles. The phrase "Para A" is spoken as "Para Alfa." The initials "ACP" would be spoken as "Alfa Charlie Papa."

Personal initials are spoken phonetically, prefixed by the proword INITIALS. For example, the name "W. T. DOOR" would be spoken as "INITIALS Whiskey Tango Door."

Familiar abbreviations that are frequently used in normal speech may be transmitted in abbreviated form on R/T. For example, the word "NATO" is spoken as "NATO." The ship "USS *Canopus"* is spoken as "USS Canopus."

## PUNCTUATION

When punctuation is necessary in an R/T message, the punctuation is pronounced as follows:

| Punctuation | Spoken |
|---|---|
| Comma | COMMA |
| Period | FULL STOP or PERIOD |
| Parentheses | PAREN/UNPAREN or OPEN BRACKETS/CLOSE BRACKETS |
| Oblique Stroke | SLANT |
| Quotation Marks | QUOTE/UNQUOTE |
| Hyphen | HYPHEN |
| Colon | COLON |
| Semicolon | SEMICOLON |
| Dash | DASH |

Roman numerals, when used, are transmitted in the same manner as the corresponding Arabic numerals and preceded by the word "ROMAN." For example, the Roman numeral III is pronounced "ROMAN Tree."

## USE OF PROWORDS

Table 2-2 contains a list of authorized prowords for general use. Prowords are used to expedite message handling on circuits where R/T procedures are used. In no case may a proword or combination of prowords be substituted for the textual component of a message. Between units of different nationalities, prowords may be replaced by their equivalent prosigns where these exist. These should be spelled out using the authorized phonetic equivalents.

**Table 2-2.—Radiotelephone Prowords, Equivalent Prosigns, and Operating Signals**

| PROWORD | EXPLANATION | EQUIVALENT TO |
|---|---|---|
| ACKNOWLEDGE (ACK) | An instruction to the addressee that the message must be acknowledged | ZEV |
| ADDRESS GROUP | The group that follows is an address group | |
| ALL AFTER | The portion of the message to which I have reference is all that which follows _____ | AA |
| ALL BEFORE | The portion of the message to which I have reference is all that which precedes _____ | AB |
| AUTHENTICATE | The station called is to reply to the challenge which follows | INT ZNB |
| AUTHENTICATI ON IS | The transmission authentication of this message is_____ | ZNB |
| BREAK | I hearby indicate the separation of the text from other portions of the message | BT |
| BROADCAST YOUR NET | Link the two nets under your control for automatic rebroadcast | |
| CALL SIGN | The group that follows is a call sign | |
| CORRECT | You are correct, or what you have transmitted is correct | C |
| CORRECTION | An error has been made in this transmission. Transmission will continue with the last word correctly transmitted | EEEEEEEE |
| | An error has been made in this transmission (or message indicated). The correct version is _____ | C |
| | That which follows is a corrected version in answer to your request for verification | C |
| DISREGARD THIS TRANSMISSION—OUT | This transmission is in error. Disregard it. This proword must not be used to cancel any message that has been completely transmitted and for which receipt or acknowledgment has been received | EEEEEEEE AR |

Table 2-2.—Radiotelephone Prowords, Equivalent prosign~ and Operating Signals—Continued

| PROWORD | EXPLANATION | EQUIVALENT TO |
|---|---|---|
| DO NOT ANSWER | Stations called are not to answer this call, receipt for this message, or otherwise to transmit in connection with this transmission. When this proword is used, the transmission must be ended with the proword OUT | F |
| EXECUTE | Carry out the purport of the message or signal to which this applies. To be used only with the Executive Method | IX |
| EXECUTE TO FOLLOW | Action on the message or signal that follows is to be carried out upon receipt of the proword EXECUTE. To be used only with the Delayed Executive Method | IX |
| EXEMPT | The addressees immediately following are exempted from the collective call | XMT |
| FIGURES | Numerals or numbers follow | |
| FLASH | Precedence FLASH | Z |
| FROM | The originator of this message is indicated by the address designator immediately following | FM |
| GROUPS | This message contains the number of groups indicated by the numeral following | GR |
| GROUP NO COUNT | The groups in this message have not been counted | GRNC |
| I AUTHENTICATE | The group that follows is the reply to your challenge to authenticate | ZNB |
| IMMEDIATE | Precedence IMMEDIATE | O |
| IMMEDIATE EXECUTE | Action on the message or signal following is to be carried out on receipt of the word "EXECUTE." To be used only with the Immediate Executive Method | IX |
| INFO | The addressees immediately following are addressed for information | INFO |
| I READ BACK | The following is my response to your instructions to read back | |
| I SAY AGAIN | I am repeating transmission or portion indicated | IMI |
| I SPELL | I will spell the next word phonetically | |
| I VERIFY | That which follows has been verified at your request and is repeated. To be used only as a reply to VERIFY | C |
| MESSAGE | A message that requires recording is about to follow. Transmitted immediately after the call. (This proword is not used on nets primarily employed for conveying messages. It is intended for use when messages are passed on tactical or reporting nets) | ZBO |
| MORE TO FOLLOW | Transmitting station has additional traffic for the receiving station | B |

Table 2-2.—Radiotelephone Prowords, Equivalent Prosigns, and Operating Signals—Continued

| PROWORD | EXPLANATION | EQUIVALENT TO |
|---|---|---|
| NET NOW | All stations are to net their radios on the unmodulated carrier wave that I am about to transmit | ZRC2 |
| NUMBER | Station Serial Number | NR |
| OUT | This is the end of my transmission to you and no answer is required or expected | AR |
| OVER | This is the end of my transmission to you and a response is nccessary. Go ahead; transmit | K |
| PRIORITY | Precedence PRIORITY | P |
| READ BACK | Repeat this entire transmission back to me exactly as received | G |
| RELAY (TO) | Transmit this message to all addressees (or addressees immediately following this proword). The address component is mandatory when this proword is used | T or ZOF |
| ROGER | I have received your last transmission satisfactorily | R |
| ROUTINE | Precedence ROUTINE | R |
| SAY AGAIN | Repeat all of your last transmission. Followed by identification data means "Repeat _____ (portion indicated)" | IMI |
| SERVICE | The message that follows is a SERVICE message | SVC |
| SIGNALS | The groups that follow are taken from a signal book. (This proword is not used on nets primarily employed for conveying signals. It is intended for use when tactical signals are passed on nontactical nets) | |
| SILENCE (Repeated three or more times) | Cease transmission on this net immediately. Silence will be maintained until lifted. (When an authentication system is in force, the transmission imposing silence is to be authenticated) | HM HM HM |
| SILENCE LIFTED | Silence is lifted. (When an authentication system is in force, the transmission lifting silence is to be authenticated) | ZUG<br>HM HM HM |
| SPEAK SLOWER | Your transmission is at too fast a speed. Reduce speed of transmission | QRS |
| STOP REBROADCASTI NG | Cut the automatic link between the two nets that are being rebroadcast and revert to normal working | |
| THIS IS | This transmission is from the station whose designator immediately follows | DE |
| TIME | That which immediately follows is the time or date-time group of the message | QTR |
| TO | The addressees immediately following are addressed for action | TO |

Table 2-2.—Radiotelephone Prowords, Equivalent Prosigns, and Operating Signals—Continued

| PROWORD | EXPLANATION | EQUIVALENT TO |
|---|---|---|
| UNKNOWN STATION | The identity of the station with whom I am attempting to establish communication is unknown | AA |
| VERIFY | Verify entire message (or portion indicated) with the originator and send correct version. To be used only at the discretion of or by the addressee to which the questioned message was directed | J |
| WAIT | I must pause for a few seconds | AS |
| WAIT-OUT | I must pause longer than a few seconds | AS AR |
| WILCO | I have received your signal, understand it, and will comply. To be used only by the addressee. Since the meaning of ROGER is included in that of WILCO, the two prowords are never used together | |
| WORD AFTER | The word of the message to which I have referenced is that which follows _____ | WA |
| WORD BEFORE | The word of the message to which I have referenced is that which precedes _____ | WB |
| WORDS TWICE | Communication is difficult. Transmit(ting) each phrase (or each code group) twice. This proword may be used as an order, request, or as information | QSZ |
| WRONG | Your last transmission was incorrect. The correct version is_____ | ZWF |

## USE OF OPERATING SIGNALS

Operating signals are not designed for R/T transmission. In R/T procedures, operating information is normally conveyed in concise phrases. However, in two circumstances it is permissible to use operating signals contained in *Communication Instructions, Operating Signals,* ACP 131, instead of standard R/T phrases. These circumstances are where there are language difficulties and where practical if there is no risk of confusion.

In such instances, operating signals must be preceded by the word "PROSIGN" or "OPERATING SIGNAL." Prosigns and operating signals are transmitted using only authorized phonetic equivalents. The prosign INT is transmitted in its prosign equivalent; that is, INTERROGATIVE. The prowords I SPELL and FIGURES are not used. Examples of prosigns and operating signals are:

QRM—OPERATING SIGNAL QUEBEC ROMEO MIKE

XMT—PROSIGN X-RAY MIKE TANGO

INT ZKA—OPERATING SIGNAL INTERROGATIVE ZULU KILO ALFA

## RADIOTELEPHONE SECURITY

In addition to adhering to circuit discipline, all users are responsible for observing proper security precautions on R/T nets. For example, many units at sea use classified call signs on tactical nets. If the operator does not know the operating situation, the classified call could be linked to the unclassified call sign for that ship. Such unauthorized disclosures are why BEADWINDOW procedures have been introduced into the R/T process.

## BEADWINDOW

BEADWINDOW is a real-time procedure used to alert circuit operators that an unauthorized disclosure has occurred over a nonsecured circuit. BEADWINDOW also warns other operators on the net of the disclosure. This serves as an educational aid. The long-term benefits of the BEADWINDOW procedure include an increased awareness of the proper use of voice circuits throughout the fleet and better security of uncovered Navy voice communications.

BEADWINDOW procedures deal with **Essential Elements of Friendly Information (EEFIs).** EEFIs are established by operational commanders. EEFIs identify specific items of information which, if revealed and correlated with other information, would degrade the security of military operations, projects, or missions in the applicable areas. EEFIs can, therefore, vary from operation to operation or from area to area. Table 2-3 contains an EEFI key number and key word definition list.

## BEADWINDOW CODE WORDS

The BEADWINDOW procedure uses the code word "BEADWINDOW" and a number combination (from the EEFI list) that is transmitted immediately to the unit disclosing an EEFI. The code word notifies the unit that it has committed the disclosure, and the number combination provides specific identity of the item disclosed. For example, when any station of the net commits a disclosure of an EEFI, net control (or any station observing the disclosure) calls the violator with

**Table 2-3.—Essential Elements of Friendly Information (EEFIs)**

| | |
|---|---|
| **01 Position** | Friendly or enemy position, movement or intended movement: position, course, speed, altitude or destination of any air, sea, or ground element unit or force |
| **02 Capabilities** | Friendly or enemy capabilities or limitation: force composition or identity capabilities, limitations or significant casualties to special equipment, weapon systems, sensors, units, or personnel. Percentages of fuel or ammunition remaining |
| **03 Operations** | Friendly or enemy operations, intentions, progress or results: operational or logistic intentions; assault objectives; mission participants; flying programs, mission situation reports; results of friendly or enemy operations |
| **04 Electronic Warfare (EW)** | Friendly or enemy EW/EMCON intentions, progress or results: intention to employ EA; results of friendly or enemy EA; objectives of EA; results of friendly or enemy EP; results of ESM; present or intended EMCON policy; equipment affected by EMCON policy |
| **05 Personnel** | Friendly or enemy key personnel: movement or identity of friendly or enemy flag officers: distinguished visitors; unit commanders; movements of key maintenance personnel indicating equipment limitations |
| **06 COMSEC** | Friendly or enemy COMSEC locations: linkage of codes or code words with plain language; compromise of changing frequencies or linkage with line numbers, circuit designators linkage of changing call signs with previous call signs or units; compromise of encrypted/classified call signs; incorrect authentication procedure |
| **07 Wrong Circuit** | Inappropriate transmission: information requested, transmitted or about to be transmitted which should not be passed on the subject circuit because it either requires greater security protection or is not appropriate to the purpose for which the circuit is provided |
| **08** | For NATO assignment, as required |
| **09** | For NATO assignment, as required |
| **10** | For NATO assignment, as required |
| **11-29** | Reserved for CINCUSNAVEUR |
| **30-49** | Reserved for CINCLANTFLT |
| **50-69** | Reserved for CINCPACFLT |

a normal call-up. The calling station then says the word "BEADWINDOW" followed by the number of the EEFI the violator disclosed.

The only authorized reply to the BEADWINDOW message is "ROGER-OUT." This method allows the reported unit to take immediate action to correct the insecure practice. In this particular situation, if the call sign of the net control is "Control" and the call sign of the violator is USS *Frances Scott Key,* Control's report would be:

"Key, THIS IS Control, BEADWINDOW Three, OVER."

The violator would reply:

"Control, THIS IS Key, ROGER, OUT."

The EEFI list should be posted in clear sight of the operator at all nonsecure voice positions for quick reference. You should remember that procedural violations are not security violations; therefore, they don't fall in the BEADWINDOW category.

## IMPORTANCE OF RADIOTELEPHONE VOICE PROCEDURES

Poor voice communications can create confusion, reduce reliability and speed, and nullify security precautions. Poor procedures can ultimately have an adverse effect on the mission of a ship.

A commanding officer, regardless of the mission of the ship, has only one real-time means of communicating with his commander and other units of a force—radiotelephone. Your ship maybe required to guard (monitor) 10 or more voice circuits, each having a specific purpose and specific procedures. Few of these circuits are operated from communications spaces except on small ships, such as submarines or destroyers. On larger ships, the circuits are handled from the bridge and the combat information center (CIC).

As an operator, you are responsible for providing reliable transmitter and receiver services to these remote operating positions. This entails establishing communications on a net or circuit before making that net or circuit available to the remote operators. If you do not know the various nets that are guarded by your ship and the purpose of these nets, the overall communications of the ship can be degraded. This could impede the progress of the entire operation.

Modern, high-speed naval operations make the elimination of confused R/T operations an absolute necessity. For example, a hunter-killer force searching for an enemy submarine is not permitted the luxury of a 5- or 10-minute delay in executing a screening signal. An unnecessary delay such as this could defeat the purpose (speed) of the officer in tactical command (OTC) when using R/T. A 1-minute delay by an aircraft carrier pilot in executing a vectoring signal because he did not understand the message could easily result in the pilot's death.

During shakedown operations, a submarine could risk collision with its escort vessel during emergency surfacing procedures if voice communications are not clearly understood.

When possible, you must use only standard phraseology, authorized prowords, and brevity code words. Standard procedures enhance reliability and clarity. Moreover, variations from standard circuit procedures provide an ideal situation for enemy imitative deception.

## BASIC RADIOTELEPHONE MESSAGE FORMAT

Radiotelephone uses a 16-line message format (table 2-4) that is comparable to formats in teleprinter communications. Radiotelephone messages also have the same three military message forms: plaindress, abbreviated plaindress, and codress.

By far, the most common message form in R/T traffic is the abbreviated plaindress. In fact, the abbreviated plaindress message is sometimes so abbreviated that it closely resembles the basic message format. The three major message parts-heading, text, and ending—are there, however. Each of these major parts is reduced to components and elements.

All format lines do not necessarily appear in every message. When a line is used, it must be placed in the message in the order shown in table 2-4. An abbreviated plaindress message may omit any or all of the following: precedence, date, date-time group (DTG), and/or group count. A codress message is one in which the entire address is encrypted within the text. The heading of a codress message contains only information necessary to enable communications personnel to handle it properly.

Notice that prowords, not prosigns, are used in voice communications. Because prowords are spoken, it is important that you, as the operator, be completely familiar with them. Refer to table 2-2 for a list of many of the commonly used prowords, their explanations, and their equivalent prosigns. Throughout this chapter, prowords are shown in all capital letters.

Table 2-4.—Radiotelephone Message Format

| PARTS/ COMPONENT S | | ELEMENTS | FORM AT LINE | CONTENTS |
|---|---|---|---|---|
| HEADING | Procedure | a. Call | 1 | Not used |
| | | b. Message follows | 2 & 3 | Stations called—Proword EXEMPT, exempted calls |
| | | c. Transmission Identification | | Proword THIS IS—station calling |
| | | | | Proword MESSAGE |
| | | d. Transmission Instructions | | Proword NUMBER and station serial number |
| | | | 4 | Prowords RELAY TO; READ BACK; DO NOT ANSWER; WORDS TWICE; Operating signals; Address Groups; Call Signs; Plain Language designators |
| | Preamble | a. Precedence; date-time group; message instructions | 5 | Precedence designation; Proword TIME: date and time expressed in digits, and zone suffix followed by month indicated by the first three letters and, if required by national authorities, the year indicated by the last two digits; operating signals and proword EXECUTE TO FOLLOW |
| | Address | a. Originator's Sign; Originator | 6 | Proword FROM. Originator's address designator |
| | | b. Action Addressee Sign | 7 | Proword TO. Action addressee designator |
| | | c. Information Addressee Sign; Information Addressee | 8 | Proword INFO. Information addressees designators |
| | | d. Exempted Addressee Sign; Exempted Addressee | 9 | Proword EXEMPT. Exempted addressee designators |
| | Prefix | a. Accounting Information, group count | 10 | Accounting symbol; group count; Proword GROUPS (GROUP NO COUNT) |
| SEPARATION | | | 11 | Proword BREAK |
| TEXT | Text | a. Subject Matter | 12 | CLEAR, UNCLASSIFIED, proword SERVICE, and/or internal instructions as appropriate; thoughts or ideas as expressed by the originator |
| SEPARATION | | | 13 | Proword BREAK |
| ENDING | Procedure | a. Time Group | 14 | Proword TIME. Hours and minutes expressed in digits and zone suffix, when appropriate |
| | | b. Final Instructions | 15 | Prowords WAIT, CORRECTION, AUTHENTICATION IS, MORE TO FOLLOW, Station designators. |
| | | c. Ending Sign | 16 | Prowords OVER, OUT |

In the following paragraphs, we will discuss the format lines used in the R/T message format. Refer to table 2-4.

**FORMAT LINES 1, 2, 3, AND 4**

Format line 1 is not used in R/T procedures. Format lines 2 and 3 contain the call sign, the proword MESSAGE, and the transmission identification.

The call may take one of the following forms:

**Full Call**

"Kamehameha (station called),

THIS IS

Vallejo" (station calling)

**Abbreviated Call**

"THIS IS

Vallejo" (station calling).

Normally, a full call is used when first establishing a net and when reporting into a previously established net. A full call is also used in the transmission instructions and address components when a message is required to be relayed to a station on a different net.

Once communications are established and no confusion will result, an abbreviated call may be used. To further expedite voice communications, the receiving station may omit the proword THIS IS when the station is responding to a call and communications are good. Additionally, the call may be omitted entirely when two stations are in continuous communication or the net is not shared by a third station.

When a collective call sign is used and some of the addressees are to be exempted, you do so in the call by using the proword EXEMPT, followed by the call sign(s) of the station(s) exempted. For example:

"Edison (collective call)

EXEMPT

Tecumseh (station exempted),

THIS IS

Vallejo" (station calling).

Notice that only one station is exempted in this call-up. If there had been more than one station, each station would have been spoken before the proword THIS IS.

After the call, transmit the proword MESSAGE if you wish to indicate that a message you are about to transmit requires recording. For example:

"Vallejo (station called),

THIS IS

Kamehameha (station calling)

MESSAGE" (message is to follow).

The transmission identification is normally a station serial number used mostly in teleprinter procedures. When used in voice communications, the transmission identification is the last element of format lines 2 and 3, consisting of the station serial number preceded by the proword NUMBER.

Format line 4 contains the transmission instructions, which may consist of the prowords RELAY TO, WORDS TWICE, DO NOT ANSWER, or READ BACK. The use of these prowords is explained later.

**FORMAT LINE 5**

Format line 5 contains the precedence, DTG, and any necessary message instructions. The precedence is the first element of format line 5. In the case of a dual-precedence message, the higher precedence is transmitted first; for example, "PRIORITY ROUTINE." The DTG is preceded by the proword TIME. An example of this format line is as follows:

"Vallejo, THIS IS Polk, RELAY TO Key, PRIORITY, TIME, Tree Zero Wun Fower Fower Fife Zulu."

Message instructions are not normally required in R/T messages. When included, they consist of short and concise instructions that indicate the status of the message. Message instructions remain with the message until the message reaches its destined station. For example, if the message is a suspected duplicate, the phrase "This Message Is A Suspected Duplicate" immediately follows the DTG.

**FORMAT LINES 6, 7, 8, AND 9**

Format lines 6, 7, 8, and 9 form the address of the message and are recognized by the prowords FROM, TO, INFO, and EXEMPT, respectively. When the originator and the addressee are in direct communication, the call may serve as the address. Table 2-5 is an example of an R/T transmission showing elements of the heading components (format lines 2 through 9).

Table 2-5.—R/T Message Showing All Possible Elements of the Address Components.

| Transmission | |
|---|---|
| F/L 2&3 | LINCOLN (Collective Call) |
| | THIS IS |
| | POLK |
| | MESSAGE |
| F/L 5 | PRIORITY |
| | TIME |
| | THREE ZERO ONE FIVE ONE |
| | ZERO ZULU |
| F/L 6 | FROM |
| | POLK |
| F/L 7 | TO |
| | LINCOLN |
| F/L 8 | INFO |
| | KEY |
| F/L 9 | EXEMPT |
| | EDISON (Exempted addressee from Collective Call) |

**FORMAT LINE 10**

Format line 10 is identified by the proword GROUPS, followed by the number of groups, or "GROUP NO COUNT." This line may contain an accounting symbol in addition to the group designation. Accounting symbols are seldom used on R/T circuits. However, they may appear on messages received for relay from circuits using other procedures. Accounting symbols are a combination of letters used to indicate the agency, service, or activity that assumes financial responsibility for the message.

Since R/T messages are usually short, a group count is seldom used. However, if a group count is sent, the number of groups is preceded by the proword GROUPS and appears in the message prefix. When a message is transmitted before the group count is determined, the proword GROUP NO COUNT is used in lieu of the group count. The actual group count may then be transmitted in the final instructions and be inserted in the message prefix by the receiving operator. The proword GROUP NO COUNT is included in messages bearing an accounting symbol when groups are not counted.

**FORMAT LINES 11 THROUGH 16**

Format line 11 contains the proword BREAK. This line separates the heading from the text. The use of this proword is not required except where confusion may be possible between the heading and text.

Format line 12 is the text of the message and expresses the idea of the originator. The primary difference between R/T text and other types of communication is that R/T text must be spoken. Therefore, it is important that new operators thoroughly familiarize themselves with the proper phrases and prowords that are commonly used in communications texts.

Format line 13 contains the proword BREAK. This line separates the text from the ending. Like format line 11, this proword should be used when confusion may occur between the text and the ending.

Format line 14 is used only in abbreviated plaindress messages when a time group is transmitted here. When used, it takes the place of a DTG in format line 5. For example, a DTG may not be determined prior to transmission. In such cases, it may be omitted in format line 5 and be sent as a time group in format line 14. When used, format line 14 consists of the proword TIME, followed by the time group plus the zone suffix. For example, you are in time zone B and you are sending a time group of 310850 in format line 14. You would transmit the time group as:

"TIME Three One Zero Eight Five Zero Bravo."

Format line 15 contains any final instructions. When used, this line may contain prowords (such as WAIT, CORRECTION, MORE TO FOLLOW, AUTHENTICATION IS), operating signals, address groups, call signs, and plain language designators.

Format line 16 is identified by the proword OVER or OUT. Every transmission ends with either OVER or OUT. However, the proword OVER may be omitted when two stations are in continuous communication with each other on a circuit not shared with a third station. In transmissions where the proword DO NOT ANSWER is used, the transmissions must end with the Proword OUT.

## RADIOTELEPHONE CALL SIGNS

Call signs used in radiotelephone are commonly known as voice call signs. They consist of spoken words, which can be transmitted and understood more rapidly and more effectively than actual names of ships and afloat commands, or phonetic equivalents of international radio call signs. Under certain circumstances, however, the phonetically spelled international call sign is used in R/T for station identification. At other times, a ship's name serves as the call sign.

R/T call signs may be assigned by an operation order (OPORD), a tactical communication plan (COMMPLAN), or permanently by commonly held communications publications. R/T call signs may be either permanent or temporary, and they may be internationally usable or locally issued. In any event, call signs are used to identify the station and to establish communications. A station's call sign can be any of the following:

- The name of the ship or aircraft tail number;
- A voice call sign listed in *Joint Voice Call Sign Book,* JANAP 119;
- An allied voice call sign listed in *Tactical Call Sign Book (U),* ACP 110; and/or
- A call sign for ships listed in *Call Sign Book for Ships,* ACP 113.

*Voice Communications,* NTP 5, lists publications that contain encrypted and daily changing call signs.

A ship must use its call sign when first establishing a net or when reporting into a previously established net. After this initial contact, an abbreviated form of communications may be used.

If call sign encryption is in effect and a ship or unit name appears in the text, the name should be replaced by the encrypted call sign or address group of the ship or unit. When used in this manner, the call sign or address group may be preceded by the proword CALL SIGN or ADDRESS GROUP, as applicable.

## ACP 113 CALL SIGNS

ACP 113 lists the international call signs and hull numbers for ships under military control. The call signs in this publication are unclassified. International call signs are used for all nonmilitary communications and military communications using unencrypted call signs.

## JANAP 119 VOICE CALL SIGNS

Voice call signs contained in JANAP 119 are pronounceable words. They are for tactical use and are designed to facilitate speed on tactical radio circuits. Secure voice call signs can be achieved only by a conscientiously applied system for changing call signs on a frequent and periodic basis.

## CALL SIGNS ON LOCAL HARBOR CIRCUITS

JANAP 119 does not assign voice call signs to administrative shore activities. Consequently, a ship cannot use a tactical call on administrative ship-shore circuits. When operating on ship-shore R/T circuits, a ship may use its international call sign. Operators must speak the call sign phonetically. For example, you would speak the international call sign NOKB as "November Oscar Kilo Bravo." The procedure described in the next paragraph may also be used.

In U.S. ports and U.S.-controlled ports overseas, the name of the ship serves as the voice call sign. As a rule, the USS prefix, hull designation and number, or the first name or initials of the ship need not be included in the voice call unless essential for clarity. This procedure also applies to shore activities on administrative nets. Each activity may use its administrative title in an abbreviated form, consistent with clarity. For example, Mobile Technical Unit 2 may have a voice call of MOTU on an administrative circuit.

Port authorities that control local harbor voice circuits are identified by the word "CONTROL." For example, let's say that the Key is entering port in New London, Conn. Key's initial call to New London Control to check into the local harbor net would be:

"Control, THIS IS Key, OVER."

If *Key* were to call Fuel Control, its call would be:

"Fuel Control, THIS IS Key, OVER."

You must remember that the simplified type of call is authorized only in U.S. ports or U. S.-controlled ports. If a ship is in a port not under U.S. control, it must conform to the international practice of using phoneticized international call signs on R/T circuits.

## RADIOTELEPHONE CIRCUITS

Voice communications requirements are grouped into two basic categories: operational or tactical, and administrative.

## OPERATIONAL OR TACTICAL CIRCUITS

Most voice circuits used at sea are operational or tactical nets; some circuits, however, are often used to pass administrative traffic. These circuits are subcategorized into two distinct types: short and long range.

Short-range operational communications normally use the UHF frequency spectrum (225 to 400 MHz) and low-power, line-of-sight equipment. Because of these frequency and equipment characteristics, the maximum effective range is usually 20 to 25 miles. This limited UHF range offers no security, and transmissions are always subject to enemy interception. However, since these transmissions are limited somewhat to the local geographic area, interception by an enemy would be difficult. On the other hand, the range of UHF communications may be extended through the proper use of relay procedures.

More and more, our modern and high-speed ships must report to OTCs from longer distances than the older ships they replaced. Long-range frequencies in the medium- and high-frequency spectrum (2 to 32 MHz) are, therefore, used. From your study of module 4, you will remember that the propagation characteristics of these frequencies make them desirable for long-range communications. To further increase the range capabilities of long-range communications, we use single-sideband (SSB) methods.

## ADMINISTRATIVE CIRCUITS

Administrative circuits are normally used only in port and may include both short- and long-range communications. Voice circuits that are neither operational nor tactical are included in the administrative category. Seldom is there such a circuit in at-sea communication plans.

Harbor common circuits and tug control nets are two examples of administrative nets. Naturally, these nets assume an operational function during situations requiring emergency procedures, such as natural disasters and civil uprisings. Circuit requirements vary from port to port, as established by the senior officer present afloat (SOPA). Both the UHF and MF/HF circuits may be used for administrative nets.

## TYPES OF NETS

There are two types of R/T nets: directed and free. The type of net to be used is determined by the operational situation. Regardless of the type of net used, a Net Control Station (NECOS) is assigned to monitor the circuit or circuits and enforce circuit discipline.

NECOS is the senior net member or designated authority. The NECOS is responsible for implementing operational procedures and enforcing discipline and security on the net. Enforcement of circuit discipline, however, is not the only reason for having a NECOS. Sometimes there are so many stations sharing a common circuit that a NECOS is necessary to facilitate the handling and passing of R/T traffic.

### Directed Net

On a directed net, stations must obtain permission from the NECOS before communicating with other stations on the net. The exception to this rule is when a station has FLASH traffic to send. Also, transmissions on the directed net may be accomplished with a predetermined schedule.

### Free Net

On the free net, member stations don't need NECOS permission to transmit. Net members must ensure that the net is not in use before initiating a call-up. A free net, however, does not relieve the NECOS of the responsibility for enforcing operational procedures and maintaining proper circuit discipline.

Both free and directed nets normally use collective call signs. Figure 2-1 diagrams an R/T net that consists of the following stations: USS Key, USS *Mariano G. Vallejo,* USS *James K. Polk,* USS *Kamehameha,* and USS *Tecumseh.* In this example, we will assume that the NECOS is *Key.* Notice that the collective call sign for the entire net is Poseidon.

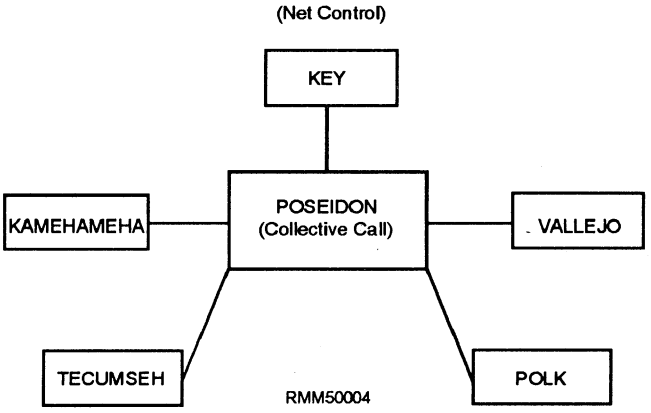


**Figure 2-1.—Radiotelephone net.**

## OPENING THE NET

The responsibility for opening the net for the first time or reopening the net after it has been temporarily secured belongs to *Key*. To accomplish this on a free net, *Key* would transmit:

"Poseidon, THIS IS Key, OVER."

After the transmission, all stations answer in alphabetical order:

"Key, THIS IS Kamehameha, OVER,"

"Key, THIS IS Polk, OVER," (and so on until all stations have responded).

After all stations on the net have answered, Key then sends:

"Poseidon, THIS IS Key, OUT."

This last message from *Key* informs all stations that their transmissions were heard and there is no traffic for them at the time.

If a station does not reply to the collective call within 5 seconds, the next station answers in proper sequence. Barring any difficulties the station may have, the delinquent station answers last. If the delinquent station is having difficulty that prevents an answer to the call, it reports in to the net as soon as possible with the transmission:

"Key, THIS IS (name of station).

Reporting In To Net, OVER."

At this time on the free net, and following a preliminary call, the stations concerned would start transmitting traffic to each other. For example, if *Vallejo* has traffic for *Kamehameha,* it would let *Kamehameha* know this with the call:

"Kamehameha, THIS IS Vallejo, OVER."

*Kamehameha* would acknowledge with:

"Vallejo, THIS IS Kamehameha, OVER."

*Vallejo* would then send its traffic.

On the directed net, when all communications over the net are controlled by the NECOS, *Key* would call the member stations and announce that the net is directed. In this initial transmission, *Key* would request information on the status of any outstanding messages. For example:

"Poseidon, THIS IS Key, This Is A Directed Net, Of What Precedence And For Whom Are Your Messages, OVER."

Each subordinate station then answers in alphabetical order, indicating its traffic on hand. For example:

"Key, THIS IS Polk, I Have One IMMEDIATE And One PRIORITY For You, OVER."

"Key, THIS IS Vallejo, No Traffic, OVER." (Other stations respond.)

After all stations have checked into the net, *Key* would ROGER for the transmissions and commence to clear traffic in the order of priority. For example:

"Poseidon, THIS IS Key, ROGER, Polk Send Your IMMEDIATE, OVER."

After *Polk* has sent its transmission and obtained a receipt, net control then gives permission to transmit to the station with the next higher precedence traffic.

After the initial traffic is cleared, stations having messages to transmit to other stations on the net must first obtain permission from net control. For example:

"Key, THIS IS Tecumseh, I Have One ROUTINE For Polk, OVER."

Net control then answers:

"THIS IS Key, Send Your Message, OVER."

As you can see from our examples, circuit discipline is essential. Regardless of whether a single ship is entering port or several ships are engaged in a major fleet exercise, voice communications are required. The number of necessary circuits and nets increases with the complexity of the task and the number of units participating.

Whether the net is free or directed, the Net Control Station has the primary responsibility for expediting message traffic. Each station is responsible for assisting net control in the proper passing of traffic. Adherence to proper operating procedures and communications standards is essential in keeping a net free of backlogs and tie-ups.

## ESTABLISHING COMMUNICATIONS

We have already discussed the procedure for calling and answering on free and directed nets. There will also be times when you will need to establish communications with a ship or station on a temporary basis to pass message traffic. This consists of nothing more than a simple call-up to initiate contact and to determine whether communications conditions are good. For example, if the USS *Ohio* wants to contact

*the* USS *Alabama* on a commonly guarded frequency, *Ohio's* initial call would be:

"Alabama, THIS IS Ohio, OVER."

Upon hearing the initial call, *Alabama* would reply:

"Ohio, THIS IS Alabama, OVER."

At this point, *Ohio* would initiate another call-up and indicate that it has traffic to pass to *Alabama.*

To use the circuit more efficiently, the operator should observe the following procedures:

Write down all messages or their substance prior to transmission, including those that must be delivered by the receiving operator to another person and those that are preceded by the proword MESSAGE.

Listen to make sure that the circuit is clear before initiating a transmission.

Speak in a clear, natural voice and pause after each natural phrase.

If technically practical, during the transmission of a message, the operator should pause after each natural phrase and momentarily interrupt his transmission (carrier). This will allow another station to break in if necessary.

Sometimes the operator must initiate test signals for the adjustment of either a transmitter or a receiver. Such signals should not exceed 10 seconds and should be composed of spoken numerals (1, 2, 3, and so on), followed by the call sign of the station transmitting the signals.

## SEQUENCE OF CALL SIGNS

Call signs or address groups in message headings should be arranged alphabetically in the order in which they are to be transmitted, whether plain or encrypted. For this purpose, the slant sign (/) and numerals 1 through 0 are considered the 27th through the 37th letters of the alphabet. When abbreviated call signs are used on a net, the sequence of answering a collective call should be the same as if full call signs were used. This will prevent confusion when these call signs are changed from full to abbreviated.

## SIGNAL STRENGTH AND READABILITY

A station is presumed to have good signal strength and readability unless the operator is notified otherwise. Queries concerning signal strength and readability should not be exchanged unless one station cannot clearly hear another station. The proword RADIO CHECK is the standard phrase used in a call-up that questions signal strength and readability. For example, let's assume that USS *Alabama* initiates a call to USS *Ohio* and wishes to know the status of communications conditions. *Alabama's* initial call would be:

"Ohio, THIS IS Alabama, RADIO CHECK, OVER."

Upon hearing this transmission satisfactorily and determining that communications conditions are clear, *Ohio* would then answer:

"Alabama, THIS IS Ohio, ROGER, OVER."

The omission of comment on signal strength and readability is understood by *Alabama* to mean that the reception is loud and clear. If any adverse conditions existed that were impeding *Ohio's* ability to maintain satisfactory communications, *Ohio* would have used one of the phrases (considered prowords) in table 2-6.

**Table 2-6.—Prowords Concerning Signal Strength and Readability**

| | |
|---|---|
| (1) **General:** | |
| RADIO CHECK | What is my signal strength and readability; that is, how do you hear me? |
| ROGER | I have received your last transmission satisfactorily. The omission of comment on signal strength and readability is understood to mean that reception is loud and clear. If reception is other than loud and clear, it must be described with the prowords in the below paragraphs |
| NOTHING HEARD | To be used when no reply is received from a called station |
| (2) **Report of Signal Strength:** | |
| LOUD | Your signal is very strong |
| GOOD | Your signal strength is good |
| WEAK | Your signal strength is weak |
| VERY WEAK | Your signal strength is very weak |
| FADING | At times, your signal strength fades to such an extent that continuous reception cannot be relied upon |
| (3) **Report of Readability:** | |
| CLEAR | Excellent quality |
| READABLE | Quality is satisfactory |
| UNREADABLE | The quality of your transmission is so bad that I cannot read you |
| DISTORTED | Having trouble reading you because your signal is distorted |
| WITH INTERFERENCE | Having trouble reading you due to interference |
| INTERMITTENT | Having trouble reading you because your signal is intermittent |

For example, if *Ohio* did not consider the transmission satisfactory, *Ohio* might reply:

"Alabama, THIS IS Ohio, WEAK And DISTORTED, OVER."

A station that wishes to inform another station of signal strength and readability does so by means of a short report of actual reception. A short report maybe "Weak but readable" or "Weak with interference." Such reports as "Five by" or "Four by four" are not authorized and are not indicative of signal strength and quality of reception.

## COMMUNICATIONS CONDITIONS

Situations exist where atmospheric conditions and interference do not present problems to successful communications. During good conditions, message parts need only be transmitted once, and, depending upon the operational situation, preliminary calls are sometimes optional.

At other times, conditions are anything but ideal and can present problems to even an experienced operator. Normal operating procedure requires an operator to transmit all call signs twice when communications conditions are bad. During bad conditions, phrases, words, or groups to be transmitted twice are indicated by the use of the proword WORDS TWICE. Reception may be verified by use of the proword READ BACK. For example, if bad communications conditions exist and *Tecumseh* has a message for *Kamehameha* that reads "Moor Starboard Side Tender," the transmission would be:

"Kamehameha, Kamehameha, THIS IS, Tecumseh, Tecumseh, WORDS TWICE, WORDS TWICE, Moor Starboard Side Tender Moor Starboard Side Tender, OVER."

Upon receipt of the message, *Kamehameha* would ROGER for it. To ensure reception during bad communications conditions, *Tecumseh* could have ended the above transmission with the proword READ BACK, sent twice. This would require *Kamehameha* to read back the message verbatim in WORDS TWICE form, thus ensuring that the message was properly received.

Another method of using the READ BACK procedure is to do so without using WORDS TWICE. If *Tecumseh* wanted *Kamehameha* to read back the message to ensure reception but did not want to use the WORDS TWICE procedure, *Tecumseh's* transmission would be:

"Kamehameha, THIS IS Tecumseh, READ BACK Text, BREAK, Moor Starboard Side Tender, OVER."

*Kamehameha* would then answer:

"Tecumseh, THIS IS Kamehameha, I READ BACK Text, Moor Starboard Side Tender, OVER."

Satisfied that *Kamehameha* has properly received the message, *Tecumseh* would then send:

"Kamehameha, THIS IS Tecumseh, That Is Correct, OUT."

If *Kamehameha* repeated back the message incorrectly, *Tecumseh* would have used the proword WRONG, followed by the correct version. *Kamehameha* would then repeat back the necessary portions until the entire message was correctly received.

When using the WORDS TWICE or READ BACK procedure, you should remember several rules. First, the prowords THIS IS and OVER are not repeated twice when using the WORDS TWICE procedure. These prowords are not spoken twice in the original transmission nor in the repeat back version. Second, the proword ROGER is not necessary to indicate receipt of the message in the READ BACK procedure. If the message is correct in its repeated back version, you would use the phrase "THAT IS CORRECT, OUT."

In a collective call where only some of the stations represented are to read back, those stations should be specified by transmitting their appropriate call signs preceding the proword READ BACK. When the order to read back is given, only those stations directed to do so will read back. The remaining stations called will keep silent unless directed by the calling station to receipt. When not preceded by identifying call signs, the proword READ BACK means that all stations are to read back if the call is a collective one.

## CORRECTIONS

When a transmitting operator makes an error, the operator uses the proword CORRECTION to correct it. The operator then repeats the last word, group, proword, or phrase correctly sent, corrects the error, and proceeds with the message. For example, let's assume that *Tecumseh* made a mistake in the message to *Kamehameha. The* method *Tecumseh* uses to correct that mistake is:

"Kamehameha, THIS IS Tecumseh, Moor Outboard Side, CORRECTION, Moor Starboard Side Tender, OVER."

If an error in a message is not discovered until the operator is some distance beyond the error, the operator may make the correction at the end of the message. Let's assume that *Key* is communicating with *Polk.* During *Key's* transmission, *Key* makes a mistake in the time group but the mistake is not discovered until near the end of the transmission. The procedure *Key* would make to correct the mistake is:

"Polk, THIS IS Key, TIME Zero Eight Two Four Zulu, BREAK, Request Status Deep Dive, BREAK, CORRECTION, TIME Zero Eight Two Five Zulu, OVER."

**REPETITIONS**

When words are missed or cannot be determined, stations may request repetitions before receipting for the message. The prowords most often used for obtaining repetitions are SAY AGAIN, ALL BEFORE, ALL AFTER, WORD BEFORE, WORD AFTER, and TO. For example, in the previous message from *Key* to *Polk,* assume that *Polk* missed the entire message after the word "Request." *Polk's* request for a repetition for that portion of the message would be:

"Key, THIS IS Polk, SAY AGAIN ALL AFTER Request, OVER."

*Key* would then reply:

"THIS IS Key, I SAY AGAIN ALL AFTER Request—Status Deep Dive, BREAK, OVER."

Upon satisfactory receipt, *Polk* would send:

"THIS IS Polk, ROGER, OUT."

This same procedure applies for the proword ALL BEFORE.

The repetition procedure is also used when a station requests that a particular word be repeated. This is done by using either of the prowords WORD AFTER or WORD BEFORE. For example:

"Key, THIS IS Polk, SAY AGAIN WORD AFTER Status, OVER."

*Key* then replies:

"THIS IS Key, I SAY AGAIN WORD AFTER Status-Deep, OVER."

The WORD BEFORE procedure would be accomplished in the same way by simply substituting the prowords.

The use of the proword TO is as follows:

"Key, THIS IS Polk, SAY AGAIN Request TO Dive, OVER."

*Key* would then reply:

"THIS IS Key, I SAY AGAIN Request TO Dive—Request Status Deep Dive, OVER."

Upon satisfactory receipt, *Polk* would reply:

"THIS IS Polk, ROGER, OUT."

An important rule to remember is that when you request repetitions in the heading of an R/T message containing FROM, TO, INFO, or EXEMPT addressees, the prowords are the key to the repetition procedures. Repetitions may be requested for all of that portion of the heading preceding or following a proword or that portion between any two prowords. For example, *Key* sends the following message to *Polk:*

"Polk, THIS IS Key, MESSAGE, PRIORITY, TIME, Zero Eight Zero Nine Three Zero Zulu, FROM Key, TO Polk, INFO Tecumseh, BREAK, Proceed Naval Underwater Sound Laboratories, Rendezvous SAQAD, I SPELL, Sierra, Alfa, Quebec, Alfa, Delta, SAQAD, Representative, BREAK, OVER."

*Polk* misses *the* portion of the message before the address and sends:

"Key, THIS IS Polk, SAY AGAIN ALL BEFORE FROM, OVER."

*Key* then sends:

"Polk, THIS IS Key, I SAY AGAIN ALL BEFORE FROM—Polk, THIS IS Key, MESSAGE, PRIORITY, TIME, Zero Eight Zero Nine Three Zero Zulu, OVER."

Upon understanding the missing portion, *Polk* sends:

"Key, THIS IS Polk, ROGER, OUT."

This same procedure can be applied to all repetition prowords. An important point for you to remember is that requests for repetition must include those portions of the heading before, after, or between the applicable prowords.

**CANCELING MESSAGES**

Before the ending proword OVER or OUT is sent, a station can cancel a message transmission by using the proword DISREGARD THIS TRANSMISSION, OUT. For example, if *Key* should realize, while sending a message, that the message is being sent in error, *Key* would cancel the transmission as follows:

". . . Proceed Underwater Sound Laboratories, DISREGARD THIS TRANSMISSION, OUT."

After a message has been completely transmitted, it can be canceled only by another message. For example:

"Polk, THIS IS Key, Cancel My Zero Eight Zero Nine Three Zero Zulu, TIME Zero Nine Five Zero Zulu, OVER."

*Polk* transmits:

"Key, THIS IS Polk, ROGER, OUT."

## RECEIPT OF A MESSAGE

No message is considered delivered on an R/T circuit until the transmitting station receives a receipt. A receipt is effected by the use of the proword ROGER. The receiving station can transmit a receipt after each message or after a string of messages if there is more than one message to be receipted for.

In a collective net, the transmitting station may determine that speed of handling should be the primary consideration. In this case, one station in the net maybe directed to receipt for the message or messages and no other station may answer until instructed to do so. This, however, does not prohibit any station in the net from requesting repetition.

## ACKNOWLEDGMENT OF R/T MESSAGES

You should not confuse an acknowledgment with a reply or receipt. An acknowledgment is a reply from an addressee indicating that a certain message was received, understood, and can be complied with. A receipt means only that the message was received satisfactorily. Only the commanding officer or his or her authorized representative can authorize communications personnel to send an acknowledgment.

A request for acknowledgment is accomplished by use of the word "acknowledge" (not a proword) as the final word of the text. The reply is the proword WILCO. If the commanding officer can acknowledge at once, the communications operator may receipt for the message with WILCO because the meaning of ROGER is contained in WILCO. If the acknowledgment cannot be returned immediately, the communications operator receipts for the message with ROGER, and replies with WILCO later. The return transmission to a request for an acknowledgment is either ROGER or WILCO; never both. For example, *Polk* receives the following transmission from *Key:*

"Polk, THIS IS Key, Request Special Communications Training, Acknowledge, OVER."

The commanding officer wishes to consider the request before acknowledging; the operator sends:

"Key, THIS IS Polk, ROGER, OUT."

After consideration, the commanding officer of *Polk* understands and can comply with the message. The operator then transmits:

"Key, THIS IS Polk, WILCO, OUT."

## VERIFICATION OF R/T MESSAGES

When a receiving station requests verification of an R/T message, the originating station verifies the message with the originating person, checks the cryptography (if the message is encrypted), and sends the correct version. For example:

"Key, THIS IS Polk, VERIFY your Zero Eight Zero Nine Three Zero Zulu—SAY AGAIN FROM TO INFO, OVER."

*Key* then transmits:

"THIS IS Key, ROGER, OUT."

After checking with the originating officer, *Key* determines that the portion to be verified is correct as transmitted previously and sends:

"Polk, THIS IS Key, I VERIFY My Zero Eight Zero Nine Three Zero Zulu, I SAY AGAIN, FROM TO INFO—FROM Key, TO Polk, INFO, OVER."

*Polk* receipts for the transmission:

"THIS IS Polk, ROGER, OUT."

## BREAK-IN PROCEDURES

A station having a message of higher precedence than the transmission in progress may break in and suspend that transmission in the following manner:

**FLASH** message—The station should break in at once and transmit the message.

**IMMEDIATE** message—The station may break in at once and pass the message. The station may make a preliminary call before transmitting the message, if necessary. On a directed net, the station must obtain control approval before transmitting the message.

**PRIORITY** message—The station should use the same procedure as for IMMEDIATE, except that only long ROUTINE messages should be interrupted.

You should be aware that the break-in procedure is not to be used during the transmission of a tactical message except to report an enemy contact. The precedence of the message spoken three times means to cease transmissions immediately. Silence must be maintained until the station breaking in has passed the message. In the following example, assume that *Tecumseh* is transmitting a message to *Kamehameha* on a free net and *Key* has a FLASH message for *Polk. Key* breaks in with the following transmission:

"FLASH, FLASH, FLASH, POLK, THIS IS Key, FLASH, OVER."

*Polk* replies:

"THIS IS Polk, ROGER, OVER."

*Key* then proceeds with the FLASH traffic and obtains a proper ROGER, thus freeing the net for further transmissions. After hearing "ROGER," *Kamehameha* recontacts *Tecumseh* for the remainder of the traffic that was being sent before the break-in:

"Tecumseh, THIS IS Kamehameha, ALL AFTER . . . . "

On a directed net, the station wishing to break in would first obtain permission from net control. For example, referring to figure 2-1, assume that *Vallejo* is transmitting a message to *Kamehameha* and *Polk* has FLASH traffic for *Tecumseh. Polk* notifies *Key* (net control):

"FLASH, FLASH, FLASH, Key, THIS IS Polk." FLASH For Tecumseh, OVER."

*Key* then answers:

"Polk, THIS IS Key, Send Your FLASH, OVER."

Upon hearing the authorization, *Tecumseh* transmits:

"THIS IS Tecumseh, OVER."

*Polk* proceeds:

"Tecumseh, THIS IS Polk, FLASH (sends message), OVER."

The preceding transmission would conclude after *Polk* had received a proper ROGER for the FLASH traffic. The two stations that were broken *(Vallejo* and *Kamehameha)* would reestablish communications using proper R/T procedures.

## EMERGENCY SILENCE

Emergency silence may be imposed on an R/T net only by competent authority. If an authentication system is in effect, a station must always authenticate a transmission that:

- Imposes emergency silence;
- Lifts emergency silence; and
- Calls stations during periods of emergency silence. When emergency silence is imposed, no receipt or answer for such transmissions is required.

To impose emergency silence, the NECOS speaks the proword SILENCE three times. For example, refer to figure 2-1 and assume that *Key* (net control) was authorized to impose emergency silence. *Key* would transmit:

"Poseidon, THIS IS Key, SILENCE, SILENCE, SILENCE, TIME One Four Four Zero Zulu, OUT."

To impose emergency silence on a particular frequency but not on all frequencies used in the net, *Key* would use the proword SILENCE (spoken three times), followed by a frequency or the frequency designator to be silenced. SILENCE (spoken three times), followed by the words "all nets,"means to cease transmissions immediately on all nets. All transmissions end with the proword OUT.

To lift emergency silence, *Key* would send the following transmission:

"Poseidon, THIS IS Key, SILENCE LIFTED, TIME One Five One Zero Zulu, OUT."

## EXECUTIVE METHOD FOR RADIOTELEPHONE

The Executive Method for R/T is used to execute a tactical message at a given instant. This method is used to ensure that two or more units make simultaneous maneuvers. Abbreviated plaindress format is normally used for Executive Method messages. These messages never have a time group included in the message ending. There are two variations of the Executive Method: delayed and immediate.

### DELAYED EXECUTIVE METHOD

A tactical message sent by the Delayed Executive Method must carry the warning proword EXECUTIVE TO FOLLOW in the message instructions immediately preceding the text. The executive signal is sent later in the form of "standby—EXECUTE," the latter word being the instant of execution. For example, referring to

figure 2-1, assume that *Key* sends the following message by the Delayed Executive Method to the collective call Poseidon:

"Poseidon, THIS IS Key, EXECUTE TO FOLLOW, Fire One Water Slug, OVER."

All stations respond in alphabetical order of full call signs:

"THIS IS Kamehameha, ROGER, OUT."

"THIS IS Polk, ROGER, OUT."

"THIS IS Tecumseh, ROGER, OUT."

"THIS IS Vallejo, ROGER, OUT."

When ready to execute, *Key* transmits:

"Poseidon, THIS IS Key, Standby, EXECUTE, OVER."

The stations then respond in alphabetical order of full call signs with:

"THIS IS (station), ROGER, OUT."

If communications conditions are good, *Key* can designate only one station to receipt for everyone to ensure that the transmission is heard. As part of the execute signal, *Key* could have transmitted:

"Poseidon, THIS IS Key, Standby, EXECUTE, Polk, OVER."

*Polk* would then ROGER with:

"THIS IS Polk, ROGER, OUT."

When considerable time has elapsed between the EXECUTE TO FOLLOW message and the actual execution message, the text to be executed should be repeated prior to the words "Standby—EXECUTE." The text should also be repeated when it is only a portion of a message or one of several outstanding "EXECUTE TO FOLLOW" messages.

## IMMEDIATE EXECUTIVE METHOD

In cases of urgency, the execute signal may be transmitted in the final instructions element of the message to which it refers. The use of the Immediate Executive Method does not allow stations to obtain verifications, repetitions, acknowledgments, or cancellations before the message is executed. These messages should be in plain language or limited to basic TURN, CORPEN, and SPEED signals.

The Immediate Executive Method uses the warning proword IMMEDIATE EXECUTE in the message instructions instead of the proword EXECUTE TO FOLLOW. The text of the signal is transmitted twice, separated by the proword I SAY AGAIN. The execute signal is transmitted in the final instructions. For example:

"Poseidon, THIS IS Key, IMMEDIATE EXECUTIVE, BREAK, Shift Your Rudder, I SAY AGAIN, Shift Your Rudder, STANDBY, EXECUTE, Polk, Vallejo, OVER."

Notice that *Key* includes both *Polk* and *Vallejo* as ROGER addressees. Again, this is done to ensure that the transmission is received by everyone involved, provided communications are good. However, if communications are bad, all stations in the net must ROGER the execution. Upon hearing their calls, *Polk* and *Vallejo* would answer:

"Key, THIS IS Polk, ROGER, OUT"

"Key, THIS IS Vallejo, ROGER, OUT."

## RADIOTELEPHONE CIRCUIT LOGS

R/T circuit logs must be maintained on all R/T nets or circuits unless otherwise directed. The circuit log shows a complete and continuous record of all transmitted and received traffic, as well as the operating condition on that radio day. Circuit logs contain the following information:

- Times of opening and closing by individual stations;
- Causes of any delays on the circuit;
- Frequency adjustments and changes;
- Unusual occurrences, such as procedural and security violations; and
- Changing of the watch.

NTP 5 contains the complete list of data required in an R/T circuit log.

When operating conditions permit and when there are no instructions to the contrary, an operator should record every transmission heard, regardless of the source or completeness. This rule applies to all tactical, command, and reporting nets. On other nets, a modified log may be kept.

Some nets may require only a modified log for ready reference. However, on nets or circuits that require complete logs, automatic recording devices

should be used to ensure a total record. Time should be automatically or manually recorded at intervals not to exceed 5 minutes.

When a message is addressed to or is to be relayed by the receiving station, the message must be written in full on a message blank. Only details needed to identify the message are inserted in the radio log. If the message does not need to be recorded in full on a message blank, the transmission should be recorded as completely as feasible in the circuit log.

When opening a new circuit or starting a log for a new day, the operator writes or types in his or her name and rank/rate or grade in full. Upon being relieved or closing the circuit, the operator must sign the log. The oncoming operator then writes or types his or her name and rank/rate or grade in full in the log.

Log entries are **never** erased. Any necessary changes are made by drawing a neat single line through the original entry and indicating the changed version adjacent to the lined out entry. When using the typewriter, the operator may use the slant key to delete erroneous entries. All changes must be initialed by the operator making the change.

## SUMMARY

Circuit discipline is achieved through the proper use of radio equipment, adherence to prescribed frequencies and operating procedures, proper training, and monitoring. The lack of circuit discipline, as well as basic negligence, inaccuracy, and laxity, is responsible for violations that endanger the integrity and security of R/T transmissions.

It is essential that operators be well trained in proper communications voice procedures to competently perform their duties. They are responsible for maintaining circuit discipline at all times. Reliability, security, and speed of communications are reduced when operators don’t follow prescribed procedures.